



SEQUENCE LISTING

<110> Eakle, Kurt
Hope, Thomas
Choi, Eun-A
Homan, Jane
Bremel, Robert D.

<120> Transgenic Animals Expressing Transdominant Negative Retroviral Nucleic Acids and Proteins

<130> GALA-08729

<140> 10/764,201

<141> 2004-01-23

<160> 18

<170> PatentIn version 3.2

<210> 1

<211> 471

<212> DNA

<213> Bovine leukemia virus

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acaccacgct cacctgcgag acccaccgta tcaactggac cgccgatgga cgaccttgcg 240
gcctcaatgg aacgttggtc cctcgactgc atgtctccga gacccgcccc caagggcccc 300
gacgactctg gatcaactgc ccccttccgg cgttcgcgc tcagcccggc ccggtttcac 360
tttccccctt cgagcgggtc ccttccagc cctaccaatg ccaattgcc tcggcctcta 420
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<210> 2

<211> 156

<212> PRT

<213> Bovine leukemia virus

<400> 2

Met Pro Lys Lys Arg Arg Ser Arg Arg Arg Pro Gln Pro Ile Ile Arg
1 5 10 15

Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
20 25 30

Pro Trp Phe Cys Pro Met Met Ser Pro Ser Met Pro Gly Ala Pro Ser
35 40 45

Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
 50 55 60

Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
 65 70 75 80

Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
 85 90 95

Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
 100 105 110

Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro Pro
 115 120 125

Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
 130 135 140

Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
 145 150 155

<210> 3
 <211> 471
 <212> DNA
 <213> Bovine leukemia virus

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<210> 4
 <211> 471
 <212> DNA
 <213> Bovine leukemia virus

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<210> 5
<211> 471
<212> DNA
<213> Bovine leukemia virus

<400> 5
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cttccccctt cgagcgggtcc cccttccagc cctaccaatg ccaattgccc tcggcctcta 420
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<210> 6
<211> 606
<212> DNA
<213> Bovine leukemia virus

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gagcgggtccc ccttccagcc ctaccaatgc caattgccct cggcctctag cgacgggtgc 420
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<210> 7
<211> 105
<212> DNA
<213> Bovine leukemia virus

<400> 7
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<210> 8
<211> 156
<212> PRT
<213> Bovine leukemia virus

<400> 8

Met Pro Lys Lys Arg Arg Ser Arg Arg Arg Pro Gln Pro Ile Ile Arg
1 5 10 15

Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
20 25 30

Pro Arg Ser Cys Pro Met Met Ser Pro Ser Met Pro Gly Ala Pro Ser
35 40 45

Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
50 55 60

Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
65 70 75 80

Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
85 90 95

Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
100 105 110

Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro Pro
115 120 125

Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
 130 135 140

Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
 145 150 155

<210> 9
 <211> 156
 <212> PRT
 <213> Bovine leukemia virus

<400> 9

Met Pro Lys Lys Arg Arg Ser Arg Arg Arg Pro Gln Pro Ile Ile Arg
 1 5 10 15

Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
 20 25 30

Pro Trp Phe Cys Pro Asp Leu Ser Pro Ser Met Pro Gly Ala Pro Ser
 35 40 45

Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
 50 55 60

Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
 65 70 75 80

Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
 85 90 95

Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
 100 105 110

Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro Pro
 115 120 125

Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
 130 135 140

Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
 145 150 155

<210> 10
 <211> 156
 <212> PRT
 <213> Bovine leukemia virus

<400> 10

Met Pro Lys Lys Arg Arg Ser Arg Arg Arg Pro Gln Pro Ile Ile Arg
 1 5 10 15

Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
 20 25 30

Pro Trp Phe Cys Pro Met Met Ser Pro Ser Met Pro Gly Ala Pro Ser
 35 40 45

Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
 50 55 60

Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
 65 70 75 80

Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
 85 90 95

Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
 100 105 110

Ala Leu Ser Pro Ala Arg Leu Asp Leu Pro Pro Ser Ser Gly Pro Pro
 115 120 125

Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
 130 135 140

Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
 145 150 155

<210> 11
 <211> 201
 <212> PRT
 <213> Bovine leukemia virus

<400> 11

Met Pro Lys Lys Arg Arg Ser Arg Arg Arg Pro Gln Pro Ile Ile Arg
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Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
 20 25 30

Pro Arg Ser Val Thr Ile Asp Ala Trp Cys Pro Leu Cys Gly Pro His
35 40 45

Glu Arg Leu Gln Phe Glu Arg Ile Asp Thr Thr Leu Thr Cys Glu Thr
50 55 60

His Arg Ile Asn Trp Thr Ala Asp Gly Arg Pro Cys Gly Leu Asn Gly
65 70 75 80

Thr Leu Phe Pro Arg Leu His Val Ser Glu Thr Arg Pro Gln Gly Pro
85 90 95

Arg Arg Leu Trp Ile Asn Cys Pro Leu Pro Ala Val Arg Ala Gln Pro
100 105 110

Gly Pro Val Arg Ser Ser Pro Phe Glu Arg Ser Pro Phe Gln Pro Tyr
115 120 125

Gln Cys Gln Leu Pro Ser Ala Ser Ser Asp Gly Cys Pro Ile Ile Gly
130 135 140

His Gly Leu Leu Pro Trp Asn Asn Leu Val Thr His Pro Val Leu Arg
145 150 155 160

Lys Val Leu Ile Leu Asn Gln Met Gly Pro Arg Gly Gly Ala Arg Ile
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Pro Asp Leu Cys Glu Gly Thr Leu Leu Leu Trp Cys Asp Ile Ile Gly
180 185 190

Gln Thr Thr Tyr Arg Asp Leu Lys Leu
195 200

<210> 12
<211> 35
<212> PRT
<213> Bovine leukemia virus

<400> 12

Met Pro Lys Glu Arg Arg Ser Arg Arg Pro Gln Pro Ile Ile Arg
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Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
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Pro Arg Ser
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<210> 13
 <211> 133
 <212> PRT
 <213> Human T-cell leukemia virus

<400> 13

Met Pro Lys Thr Arg Arg Arg Pro Arg Arg Ser Gln Arg Lys Arg Pro
 1 5 10 15

Pro Thr Pro Trp Pro Thr Ser Gln Gly Leu Asp Arg Val Phe Phe Ser
 20 25 30

Asp Thr Gln Ser Thr Cys Leu Glu Thr Val Tyr Lys Ala Thr Gly Ala
 35 40 45

Pro Ser Leu Gly Asp Tyr Val Arg Pro Ala Tyr Ile Val Thr Pro Tyr
 50 55 60

Trp Pro Pro Val Gln Ser Ile Arg Ser Pro Gly Thr Pro Ser Met Asp
 65 70 75 80

Ala Leu Ser Ala Gln Leu Tyr Ser Ser Leu Ser Leu Asp Ser Pro Pro
 85 90 95

Ser Pro Pro Arg Glu Pro Leu Arg Pro Ser Arg Ser Leu Pro Arg Gln
 100 105 110

Ser Leu Ile Pro Gln Pro Pro Thr Phe His Pro Pro Ser Ser Arg Pro
 115 120 125

Cys Ala Asn Thr Pro
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<210> 14
 <211> 480
 <212> DNA
 <213> Bovine leukemia virus

<400> 14

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 atcatcagat ggcaagtgtt gttggttggg ggccccactc tctacatgcc tgcccgcccc 240
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<210> 15
 <211> 64
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 15
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 gggg 64

<210> 16
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 16
 ggggaccact ttgtacaaga aagctgggtc tcaaaaaagg cgggagagc 49

<210> 17
 <211> 20
 <212> PRT
 <213> Human T-cell lymphotropic virus

<400> 17

Ser Leu Ile Gln Pro Pro Thr Phe His Pro Pro Ser Ser Arg Pro Cys
 1 5 10 15

Ala Asn Thr Pro
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<210> 18
 <211> 26
 <212> PRT
 <213> Bovine leukemia virus

<400> 18

Phe Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro
 1 5 10 15

Pro Ser Ser Pro Thr Asn Ala Asn Cys Pro
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